

# **Landsat Data Continuity Mission (LDCM) Data Policy**

**November 1, 2001**



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## **I. INTRODUCTION**

This document establishes policy for the acquisition, archival, and distribution of land remote sensing data and data products procured or otherwise acquired by the United States Government for the Landsat Data Continuity Mission (LDCM). The LDCM is being planned to succeed Landsat 7. Section 401 of Public Law 102-555, The Land Remote Sensing Policy Act of 1992, directs Landsat Program Management to assess options for successor missions to Landsat 7 that “encourage the development, launch, and operation of a land remote sensing system that maintains data continuity with the Landsat system.” Presidential Decision Directive NSTC-3 (signed May, 1994 and revised October 16, 2000) directs the National Aeronautics and Space Administration (NASA) and the Department of the Interior’s (DOI) United States Geological Survey (USGS) to work together “and with other relevant agencies to develop a strategy for maintaining continuity of the Landsat-type data beyond Landsat 7 that is consistent with each agency’s expertise and mission.” NASA and DOI/USGS are implementing these laws and directives through the LDCM.

Section 401 of Public Law 102-555 also states that “preference should be given to the development of such a system by the private sector” in reference to the Landsat 7 successor system. Since these data are not readily available for purchase in the commercial market, NASA and DOI/USGS intend to procure these data through a government-industry cooperative procurement, in accordance with this guidance. It is NASA’s and DOI/USGS’s intent that the remote sensing system acquiring this data, developed through the LDCM procurement, will be privately owned and privately operated.

{ **NB:** This Data Policy is a draft and may be revised as a result of mission formulation studies conducted during step 1 of this 2-step procurement. }

## **II. SCOPE**

This Policy is applicable to both the government agencies involved in LDCM (NASA and DOI/USGS) and the developer/owner/operator of the LDCM remote sensing system (hereinafter referred to as the LDCM Contractor). The intent of this Policy is to define the protections, limitations, and rights of NASA, DOI/USGS, and the LDCM Contractor related to all data acquired by the LDCM remote sensing system, to data products that may be produced by the Government or the LDCM Contractor, and to the distribution of these data and data products.

## **III. POLICY GOALS**

The LDCM Data Policy defines and promotes NASA and DOI/USGS goals for the LDCM. To ensure continuity, this Policy also extends the relevant goals of the Landsat 7 Data Policy.

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The following goals were originally established in Section 105 of Public Law 102-555:

1. “Ensure that unenhanced data are available to all users at the cost of fulfilling user requests;”
2. “Ensure timely and dependable delivery of unenhanced data to the full spectrum of civilian, national security, commercial, and foreign users and the National Satellite Land Remote Sensing Data Archive (NSLRSDA);”
3. “Support the development of the commercial market for remote sensing data;” and
4. “Ensure that the provision of commercial value-added services based on remote sensing data remains exclusively the function of the private sector.”

NASA and DOI/USGS have two additional goals:

5. To minimize the price of LDCM Data Products to promote their use by the broadest group of users, and
6. To continue the Landsat 7 data acquisition strategy for the LDCM.

Landsat 7 operates as a global survey mission, based on a long-term acquisition, archive, and distribution data acquisition strategy to provide systematic, seasonal, global coverage of the Earth’s land mass. This long-term acquisition, archive, and distribution strategy is in contrast to a single-user focus acquisition strategy to solely fulfill individual user data requests, although the new strategy also accommodates individual users. The LDCM data acquisition specifications are based on continuing the Landsat 7 archive strategy.

#### **IV. DEFINITIONS**

Landsat Program Management:

Landsat Program Management consists of the Administrator of NASA and the Secretary of the Interior. The October 16, 2000 Amendment to Presidential Decision Directive/NSTC-3 states that “the Secretary of the Interior and the Administrator of NASA are hereby designated as members of the Landsat Program Management in accordance with section 101(b) of the Land Remote Sensing Policy Act of 1992.” The Amendment further assigns NASA and DOI/USGS the responsibility for “maintaining continuity of Landsat-type data beyond Landsat 7” under direction of Landsat Program Management.

Land Remote Sensing:

Public Law 102-555 defines “land remote sensing” as: “...the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites,

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other than an operational United States Government weather satellite.”

LDCM Contractor:

The LDCM Contractor is the private owner of the remote sensing system from which NASA and DOI/USGS will procure land remote sensing data for the LDCM. This private organization will be selected competitively through a joint NASA-USGS procurement based on Federal Acquisition Regulations.

LDCM Sensors:

The LDCM Sensors are the instruments that acquire and generate the land remote sensing data that will be procured by NASA and DOI/USGS under the LDCM.

LDCM Data:

LDCM Data are unprocessed land remote sensing data directly generated by the LDCM Sensors and procured by NASA and DOI/USGS per the specifications defined by the LDCM. LDCM Data also include metadata, browse and ancillary data associated with the LDCM Data and Data Products.

Unenhanced Data:

Public Law 102-555 defines unenhanced data as: “...land remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing.”

Data Preprocessing:

Public Law 102-555 states that data preprocessing “...may include –

- (A) rectification of system and sensor distortions in land remote sensing data as it is received directly from the satellite in preparation for delivery to a user;
- (B) registration of such data with respect to features of the Earth; and
- (C) calibration of spectral response with respect to such data, but does not include conclusions, manipulations, or calculations derived from such data, or a combination of such data with other data.”

{ N.B. Preprocessing may include the aggregation of higher spatial and/or spectral resolution data to produce data meeting the LDCM specifications. }

LDCM Data Products:

LDCM Data Products are products derived from LDCM Data. These products will contain either unprocessed LDCM Data or preprocessed LDCM Data. The LDCM Data Products containing

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unprocessed LDCM Data are referred to as Level 0 data products and may be proprietary. The LDCM Data Products containing preprocessed LDCM Data are referred to as Level 1 data products and are in the public domain.

**Value-Added Data Products:**

Value-added data products are any products derived from LDCM Data processed or otherwise enhanced beyond the steps defined above as “data preprocessing.”

**National Satellite Land Remote Sensing Data Archive (NSLRSDA):**

Public Law 102-555 defines the “National Satellite Land Remote Sensing Data Archive” as: “...the archive established by the Secretary of the Interior pursuant to the archival responsibilities defined in section 502.” NSLRSDA is currently managed by DOI’s USGS EROS Data Center.

**V. LDCM DATA**

NASA and DOI/USGS will specify the characteristics and quantity of LDCM Data required for the LDCM to maintain continuity with existing Landsat data as directed by Public Law. The government will own these data under the LDCM procurement. The contractor may also possess these data for commercial purposes.

NASA and DOI/USGS will require archiving of the procured LDCM Data in a timely manner.

The general public will be able to search the LDCM Data archive for the purpose of selecting and ordering LDCM Data Products. Such access will be provided in a manner that maximizes efficiency, such as via the Internet or other global network.

NASA and DOI/USGS will only allow distribution of LDCM Data to appropriate officers and employees of the two agencies, primarily to assure data and data product quality and accuracy.

LDCM Data will be delivered to NSLRSDA in a timely manner to ensure long-term archival continuity with existing Landsat data in NSLRSDA.

**VI. LDCM DATA PRODUCTS**

NASA and DOI/USGS will specify the characteristics and quantity of LDCM Data Products required for the LDCM. All LDCM Data Products specified by NASA and DOI/USGS meet the definition of unenhanced data per Public Law 102-555.

NASA and DOI/USGS will require production of LDCM Data Products in a timely manner following the placement of an order.

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Level 0 LDCM Data Products will be required for purposes of assuring data and data product quality and accuracy, such as sensor calibration and data validation. NASA and DOI/USGS will require distribution of Level 0 LDCM Data Products to appropriate officers and employees of the two agencies for such purposes. NASA, the DOI/USGS, and the LDCM Contractor may mutually agree to a wider distribution.

Level 1 LDCM Data Products shall be available for distribution without restriction on a nondiscriminatory basis to all Landsat data users and the general public based on the established pricing policy. NASA and DOI/USGS will require distribution of these products at the lowest possible prices in a timely manner that facilitates the widest possible access, such as via the Internet or other global network.

Neither NASA and DOI/USGS nor the LDCM Contractor shall place any restrictions, limitations, or constraints on the use, resale, secondary distribution, or sharing of (unenhanced) Level 1 LDCM Data Products initially distributed to a third party consistent with Office of Management and Budget (OMB) Circular A-130.

Neither NASA and DOI/USGS nor the LDCM Contractor shall impose licensing or royalty fees on any subsequent resale of (unenhanced) Level 1 LDCM Data Products initially distributed to a third party in accordance with OMB Circular A-130.

## **VII. LDCM DATA PRODUCT DISTRIBUTION**

The LDCM product distribution system will maintain or improve upon the performance of the current DOI/USGS-operated Landsat product distribution system, which is widely accepted by the Landsat data user community.

{ **NB:** For the distribution of LDCM Data Products, the LDCM Contractor is empowered to use the DOI/USGS product distribution system or to propose an alternate system - whichever is in the best interest of all concerned: the Government, the Landsat data user community, and the LDCM Contractor. }

## **VIII. PRICING**

LDCM Data Products shall be provided at the lowest possible price to all Landsat data users. As a first principle, the price shall be no more than the cost of fulfilling a user request in accordance with OMB Circular A-130.

The specific approach to pricing, both domestic and foreign, will depend upon the LDCM Contractor's economic model and business plan, but must honor the goals of this data policy.

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**IX. VALUE-ADDED DATA PRODUCTS**

NASA and DOI/USGS will treat enhanced, value-added data products produced by private industry as proprietary commercial property.

NASA and DOI/USGS will impose no restrictions, limitations, conditions, or provisions on the sale and pricing of value-added data products generated by the LDCM Contractor using LDCM Data.

Neither NASA and DOI/USGS, nor the LDCM Contractor will restrict, limit, or otherwise constrain the sale and pricing of value-added data products derived from Level 1 LDCM Data Products by any third party.

Neither NASA and DOI/USGS nor the LDCM Contractor will impose licensing or royalty fees on any value-added data products derived from Level 1 LDCM Data Products by any third party.

**X. OTHER DATA ACQUIRED OR PRODUCED BY THE LDCM CONTRACTOR**

Land remote sensing data acquired by the LDCM Contractor beyond that procured by NASA and DOI/USGS for the LDCM will be considered the LDCM Contractor's property and will not be subject to the policies contained herein for LDCM Data and LDCM Data Products.

NASA and DOI/USGS will impose no restrictions, limitations, conditions, or provisions on the sale and pricing of data acquired by the LDCM Contractor beyond that procured by NASA and DOI/USGS. NASA and DOI/USGS will impose no restrictions, limitations, conditions, or provisions on the sale and pricing of data products derived from these data, with the exception of restrictions imposed by licensing under Title II of Public Law 102-555.

NASA and DOI/USGS will impose no restrictions, limitations, conditions, or provisions on the sale and pricing by the LDCM Contractor of unenhanced or enhanced data products that exceed NASA and DOI/USGS LDCM Data specifications with respect to spatial or spectral resolution.

**XI. INTERNATIONAL COOPERATORS**

It is the intention of this data policy to continue providing access to Landsat-type data to International Cooperators, particularly those who have received Landsat data in the past as members of the Landsat 5/7 network of international ground stations. Such stations are typically government owned, non-profit entities.

**XII. REFERENCES**

o Landsat 7 Data Policy, February 9, 2000

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- o Presidential Decision Directive NSTC-3 (signed May, 1994 and revised October 16, 2000)
- o Land Remote Sensing Policy Act of 1992
- o Executive Office of the President, Data Management for Global Change Research Policy Statements, 1991
- o OMB Circular No. A-16, Coordination of Surveying and Mapping Activities, 1990
- o OMB Circular No. A-130, Management of Federal Information Resources, 1996
- o United Nations Principles on Remote Sensing of the Earth from Space, United Nations Resolution 41/65, 3 December 1986.